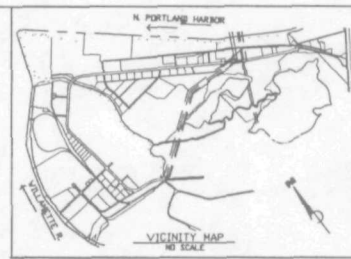
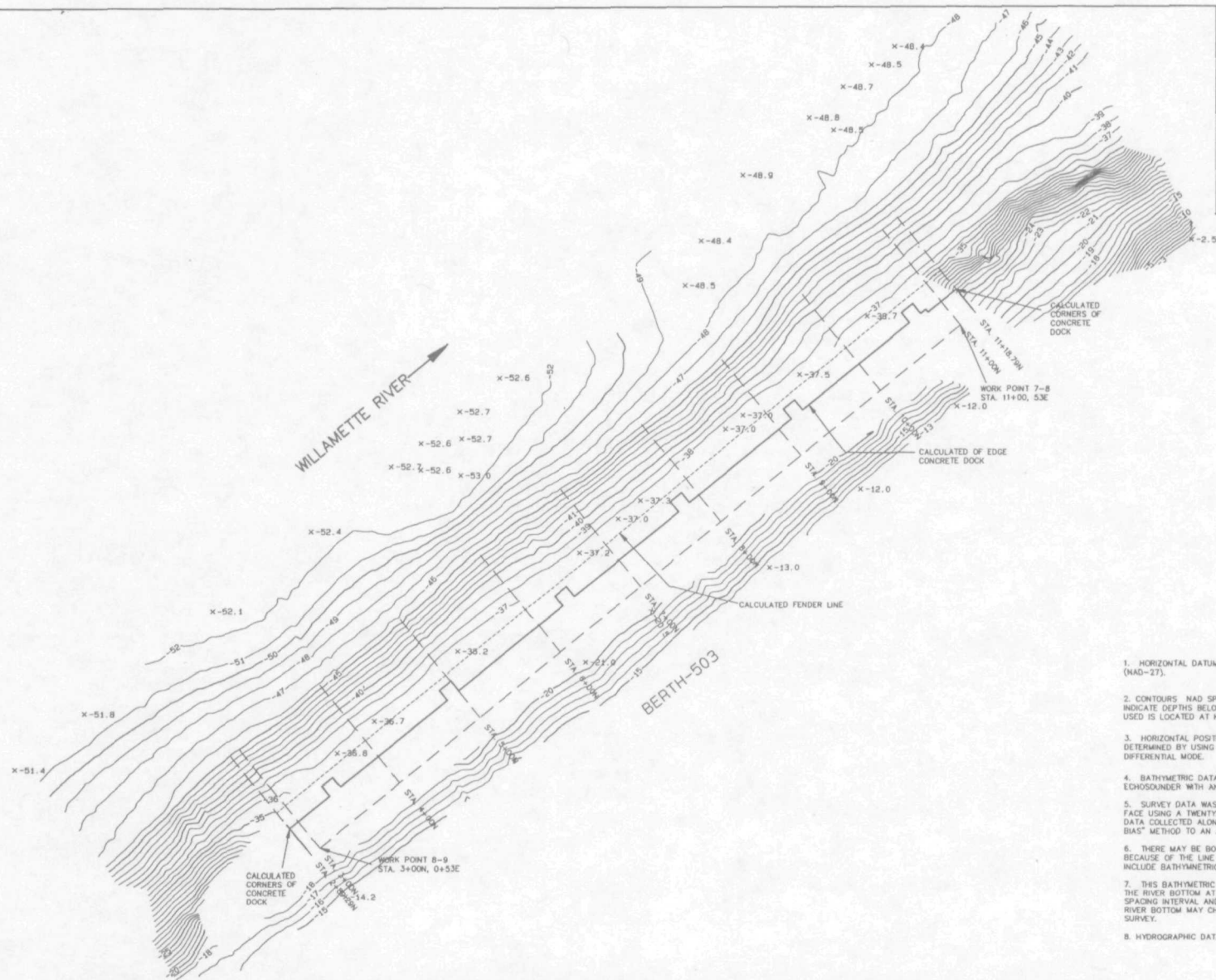


USEPA SF  
11,3,31.5.1



1. HORIZONTAL DATUM: OREGON COORDINATE SYSTEM, NORTH ZONE (NAD-27).
2. CONTOURS: HAD SPOT ELEVATIONS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW COLUMBIA RIVER DATUM ZERO. THE TIDE USED IS LOCATED AT KELLY POINT AT THE CONFLUENCE OF WILLAMETTE RIVER.
3. HORIZONTAL POSITIONS FOR NAVIGATION AND DATA COLLECTION WERE DETERMINED BY USING A TRIMBLE 4000SSE G.P.S. SYSTEM OPERATING IN A DIFFERENTIAL MODE.
4. BATHYMETRIC DATA WAS COLLECTED USING AN INHERSPACE-448 ECHOSOUNDER WITH AN 8' SINGLE BEAM TRANSDUCER.
5. SURVEY DATA WAS COLLECTED LONGITUDINALLY WITH THE DOCK FACE USING A TWENTYFOOT LINE SPACING. THE SURVEY DATA COLLECTED ALONG EACH SURVEY LINE WAS THINNED USING A "SHOAL BIAS" METHOD TO AN APPROXIMATE HORIZONTAL SPACING OF 5 FEET.
6. THERE MAY BE BOTTOM FEATURES THAT ARE NOT SHOWN ON THIS MAP BECAUSE OF THE LINE SPACING INTERVAL. THIS SURVEY DOES NOT INCLUDE BATHYMETRIC DATA BETWEEN THE ADJACENT SURVEY LINES.
7. THIS BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE CONDITION OF THE RIVER BOTTOM AT THE TIME OF THE SURVEY BASED ON THE LINE SPACING INTERVAL AND THINNING METHOD USED. THE CONDITION OF THE RIVER BOTTOM MAY CHANGE AT ANY TIME AFTER THE DATE OF THIS SURVEY.
8. HYDROGRAPHIC DATA COLLECTED: AUGUST 27, 1996

NO.	DATE	BY	REVISIONS	CK'D	APP'D	NO.	DATE	BY	REVISIONS	CK'D	APP'D

	<b>PORT OF PORTLAND</b> PORTLAND, OREGON 	<b>REGISTERED PROFESSIONAL LAND SURVEYOR</b> 	DESIGNED BY: D. DESIGNER DRAWN BY: G. BAIRD CHECKED BY: R.W. GLAESER DATE: AUGUST 1996 SCALE: 1"=50'	<b>TERMINAL-5</b> HYDROGRAPHIC SURVEY <b>PRE-DREDGE FOR BERTH-503</b> <b>ON THE WILLAMETTE RIVER AT R.M. 1.4+/-</b>
	950028 <small>DESIGN NUMBER</small>	51241-596 <small>PROJECT NUMBER</small>	9/4/96	SUBMITTED BY: DRAWING NO. T5 96-503 1/1 (SU)